CLOUDLEAF Asset Tag: ASST2i-G1G

User Guide

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Introduction

The ASST2i-G1G Tag is a key component of the CloudLeaf System. The ASST2i-G1G is a small BLE (Bluetooth Low Energy) that enables the wireless network infrastructure to locate assets not connected to a wireless network. The tag can be attached to people and to a variety of equipment, such as containers, manufacturing equipment and vehicles. This enables tagged items to be accurately located in real-time and in any environment – from tight indoor locations such as Manufacturing floors to open outdoor spaces such as parking lots.

ASST2i-G1G Tag

ASST2i-G1G Features

Motion Sensing

ASST2i-G1G Tags contain on-board motion sensors. The motion sensor can be configured to trigger alerts. It also enables different transmission intervals for tags when they are stationary or in motion – which reduces unnecessary network traffic and conserves battery life.

Telemetry Functionality

The ASST2i-G1G Tags include a serial interface that enables customized connectivity to host units for data retrieval. The tags can be configured to retrieve data from the host periodically and to send the data together with location messages. Applications for this function may include reading temperature from shipping containers.

Long Battery Life

A powerful battery provides power for a period of up to 2 years. Based on Thionyl Chloride AA Battery, the Tag periodically provides a report on the battery level so that when the battery level runs low, it can be replaced efficiently with minimum down time. The Tag can also be easily modulated in order to conserve battery power.

Rugged Performance

Cloudleaf Tags are designed to function in harsh work environments and weather conditions. The tag enclosure is water-resistant, including immersion (IP-67) and designed to withstand significant physical shocks.

Compatibility and Non-interference

Cloudleaf Tags are based Bluetooth Low Energy based and IEEE 802.15.1. The tag's clear channel sensing techniques avoid interference with any IEEE 802. xx networks. The use of the unlicensed 2.4GHz frequency band at low power levels ensures no interference with other wireless equipment, making CloudLeaf tags safe for use with such sensitive equipment.

Tag Management

The CloudLeaf Tag can be configured, programmed and activated via a wireless interface. This is done with the help of the Cloudleaf Tag Provisioning application. Which can be done via Cloud Dashboard, or Mobile App designated to user.

In addition, Tag Provisioning is used to activate and deactivate tags and to program stored messages on the tags.

Cleaning the Tag

Cleaning the external surface of the Tag's housings can be done using Alcohol or Chloride based wipers only.

Specifications

Performance

- Outdoor range: Up to 90m
- Indoor range: Up to 60m

Environmental Specifications

- Temperature: -40°C to +85°C
- Humidity: 0 to 100%, condensing
- The housing is water and dust resistant.
- IP-67

Electrical

- 3.6V Lithium Thionyl Chloride AA Battery (Sealed)
- Battery life: up to 2 years

Radio

- Bluetooth Low Energy 4.2 & IEEE 802.15.1 Compliant 2.4GHz Radio.
- Transmission Power up to: 0.4315mW

Safety

- CE

Certification Radio

- FCC Part 15, sub-part C class B, sub-part B

Safety and Warnings

FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

a) Reorient or relocate the receiving antenna. b) Increase the separation between the equipment and receiver. c) Connect the equipment to an outlet on a circuit different from that to which the receiver is connected. d) Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions: a) This device may not cause harmful interference b) This device must accept any interference received, including interference that may cause undesired operation.

FCC Warning

Modifications not expressly approved by the manufacturer could void the user authority to operate the equipment under FCC Rules.

“FCC RF Radiation Exposure Statement Caution: To maintain compliance with the FCC’s RF exposure guidelines, place the product at least 20cm from nearby persons.”